

AMENDMENTS TO THE CLAIMS:

The listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended) A catheter assembly comprising:  
a control handle;  
an inner member having a distal portion for mounting a medical device and a proximal portion having a proximal end attached to the control handle and a distal end attached to the distal portion;  
a guide wire receiving member defining a lumen for receiving a guide wire attached to the proximal portion of the inner member; and  
an outer member having a proximal end and a distal end, the proximal end being connected to the control handle, the outer member including a distal portion adapted to at least partially cover the medical device and being retractable by actuation of the control handle to uncover the medical device, the outer member having a distal opening and a lumen through which at least a portion of the guide wire receiving member extends and a guide wire exit opening formed proximal to the distal end of the outer member, the inner member and the outer member dimensioned for relative axial movement along a longitudinal axis, wherein the distal portion has an inner surface which is adapted to directly contact the medical device and an outer surface, the inner surface of the distal portion being made from a layer of polyimide and the outer surface of the distal portion being made from a layer of nylon and a continuous direct bond joining the layer of nylon to bonded to the layer of polyimide.  
2. (Withdrawn) The catheter assembly of claim 1 wherein the guide wire receiving member is made from a tubular member having a wire coil disposed therein.

3. (Previously Presented) The catheter assembly of claim 1 wherein the proximal portion of the inner member is made with a hypotube.

4. (Previously Presented) The catheter assembly of claim 3 wherein the hypotube is made from stainless steel or a nickel-titanium alloy.

5. (Withdrawn) The catheter assembly of claim 1 wherein the proximal portion is made from a tubular member having a wire coil disposed therein.

6. (Withdrawn) The catheter assembly of claim 1 wherein the proximal portion is made with a support mandrel.

7. (Withdrawn) The catheter assembly of claim 6 wherein the support mandrel is made from a flexible elongate wire.

8. (Original) The catheter assembly of claim 1 wherein the outer member includes a distal restraining sheath portion adapted to cover the medical device which is made from a nylon-coated polyimide material.

9. (Original) The catheter assembly of claim 8 wherein the nylon-coated polyimide material has an inner layer made from polyimide and an outer layer made from nylon.

10-17. (Canceled)

18. (Currently Amended) A sheath for restraining a self-expanding stent on a catheter assembly, the sheath comprising:

a tubular body having an inner surface which directly contacts the self-expanding stent and an outer surface, the tubular body being made from a layer of polyimide to form the inner surface and a layer of ~~nylon bonded to the layer of polyimide~~ to form the outer surface and a continuous direct bond joining the layer of polyimide to the layer of nylon.

19-23. (Canceled)

24. (Previously Presented) The catheter assembly of claim 3 wherein the hypotube includes a lumen for flushing fluid into the catheter.

25. (Previously Presented) The catheter assembly of claim 1 wherein the guide wire receiving member is a tubular member having a lumen for receiving the guide wire.

26. (Currently Amended) A catheter assembly comprising:  
a control handle;

an inner catheter member including a distal mounting portion adapted to have a medical device mounted thereon, a proximal portion having a proximal end attached to the control handle, and a guide wire receiving member for receiving a guide wire, the guide wire receiving member being attached to the proximal portion of the inner catheter member, the guide wire receiving member having a proximal end with an opening and a distal end with an opening, a lumen extending between these openings formed on the distal and proximal ends of the guide wire receiving member; and

an outer catheter member co-axially disposed over the inner catheter member and dimensioned for relative axial movement relative to each other, the outer catheter member having a distal portion adapted to at least partially cover the medical device, the distal portion having an inner surface which directly contacts the medical device and an outer surface, the distal portion being made from a layer of polyimide which forms the inner surface and a layer of nylon ~~bonded to the layer of polyimide~~ to form the outer surface and a continuous direct bond joining the layer of polyimide to the layer of nylon, the outer catheter member having a proximal end attached to the control handle and a distal end opening, the outer catheter member being movable by the control handle to uncover the medical device, the outer catheter member including a proximal portion having a lumen for receiving at least a portion of the inner catheter member and an intermediate portion having a lumen through which the guide wire receiving member extends and a guide wire exit opening formed proximal to the distal end of the outer member.

27. (Previously Presented) The catheter assembly of claim 26, wherein the proximal end of the guide wire receiving member is slidably disposed within the lumen of the intermediate portion of the outer catheter member.

28. (Previously Presented) The catheter assembly of claim 26 wherein the distal mounting portion of the inner catheter member has a lumen extending therethrough and a portion of the guide wire member extends through this lumen.

29. (Previously Presented) The catheter assembly of claim 28 wherein the portion of the guide wire receiving member extending through the lumen of the distal mounting portion is secured to the wall forming the lumen.

30. (Previously Presented) The catheter assembly of claim 28 wherein the portion of the guide wire receiving member which does not extend through the lumen of the distal mounting portion is slidably disposed within the lumen of the intermediate portion of the outer catheter member.

31. (Previously Presented) The catheter assembly of claim 26 wherein the lumen of the intermediate portion of the outer catheter member has a proximal opening and the proximal portion of the outer catheter member extends into this proximal opening.

32. (Previously Presented) The catheter assembly of claim 31 wherein the guide wire receiving member is housed in the lumen of the intermediate portion.

33. (Previously Presented) The catheter assembly of claim 26 wherein the intermediate portion of the outer catheter member is made from a material which is more flexible than the material forming the proximal portion of the outer catheter member.

34. (Previously Presented) The catheter assembly of claim 26 wherein the proximal portion of the inner catheter member is made from a hypotube.

35. (Canceled)

36. (Canceled)

37. (Withdrawn) The catheter assembly of claim 1 wherein the guide wire receiving member is made from a tubular member having a wire coil disposed therein.

38. (Previously Presented) The catheter assembly of claim 1 wherein the proximal portion of the inner member is made with a hypotube.

39. (Previously Presented) The catheter assembly of claim 3 wherein the hypotube is made from stainless steel or a nickel-titanium alloy.

40-43. (Canceled)

44. (Currently Amended) A catheter assembly comprising:  
a control handle;

an inner catheter member including a distal mounting portion adapted to have a medical device mounted thereon, a proximal portion having a proximal end attached to the control handle, a guide wire receiving member for receiving a guide wire, the guide wire receiving member having a proximal end with an opening and a distal end with an opening, a lumen extending between these openings, and a channel formed near the proximal opening of the guide wire receiving member; and

an outer catheter member co-axially disposed over the inner catheter member and dimensioned for relative axial movement relative to each other, the outer catheter member having a distal portion adapted to at least partially cover the medical device, the distal portion having an inner surface which directly contacts the medical device and an outer surface, the distal portion being made from a layer of polyimide which forms the inner surface and a layer of nylon ~~bonded to the layer of polyimide~~ to form the outer surface and a continuous direct bond joining the layer of polyimide to the layer of nylon, the outer catheter member having a proximal end attached to the control handle and a distal end opening, the outer catheter member being movable by the control handle to uncover the medical device, the outer catheter member including a proximal portion having a lumen for receiving at least a portion of the inner catheter member and the guide wire

receiving member and a guide wire exit opening formed proximal to the distal end of the outer catheter member.

45-46. (Canceled)